



S. O. B. !!!

Save On Bulbs !!!

As the cost of maintaining an eye clinic or center goes up every year, we try our best to minimize on expenses. One of the consumables that we can definitely save on is our slitlamp bulb which can cost from 2,000 to 4,000 pesos each.

The slitlamp is possibly the most used and abused instrument in our clinic. Whether you've been practicing for decades or just starting out, it still remains as an integral and indispensable part in our patient examination and treatment.

One way to extend the life of the bulb is make sure you turn off your instruments after using it. However, we oftentimes forget to switch it off thereby shortening the bulbs's lifespan as well as contributing to an increase in our electricity bills. This is especially true for slitlamps that still use halogen lamps compared to those using LED. Just today alone, I called the attention of several residents and interns a couple of times because they keep on forgetting to switch off their slitlamps after examining a patient.

An automatic shutoff mechanism installed in slitlamps could address this problem and there are several ways to do this:

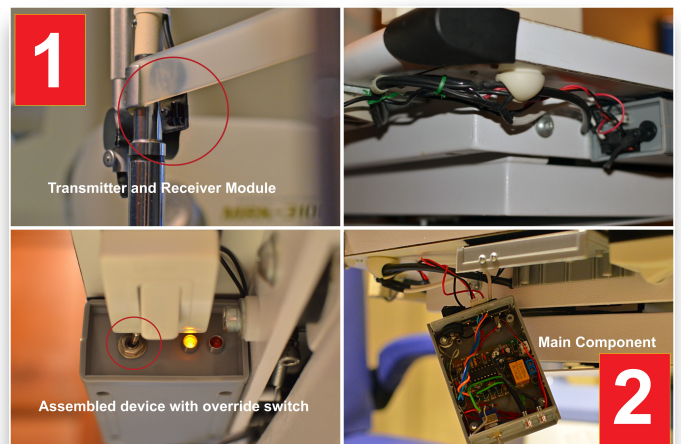
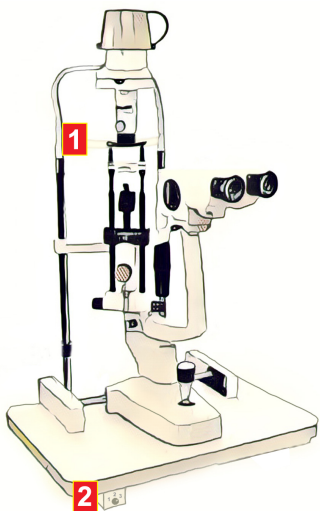
1. Persistent audio feedback like when we forget to turn off the headlights in our cars after removing the key from the ignition
2. Mechanical switch placed under the chin rest or forehead rest that turns the light on and off
3. Proximity sensor that detects objects using infrared light

I decided to go with the latter one since it offers more advantage and flexibility.

You've probably noticed the automatic hand dryers and faucets in hotels and malls which turns on when it detects your hand near it and turns off when you remove your hand. Both of these are equipped with proximity sensors and help save electricity and water.

It would be a good idea then if your instruments can be installed with the same proximity sensors so they can automatically turn off when not in use. With a bit of rewiring, some technical knowhow on soldering electronic

components and a little imagination, the same kind of sensor can be attached to your slitlamp. The kit was assembled inside a housing small enough to be placed adjacent to the main switch making it convenient. It runs on 6 to 12 volts power adapter and has an override switch in case the device malfunctions or you need to position the patient in a different way. The transmitter-receiver module (1) can be placed on either side of the forehead rest, has a sensing distance of about 12cm and connected to the main component (2). It is constantly transmitting infrared light and when an object goes near it, the infrared light is reflected back to the receiver thereby triggering the switch that turns the light on. Depending on the setting, the light will turn off automatically when the object is removed anywhere between 0 to 40 seconds.



So with enough patience in acquiring, assembling and installing the necessary parts, unnecessary expenses can be limited.

Watch the short video below to see the how the proximity sensor works. <https://youtu.be/HzICTpmdzJY>

Pros:

- Inexpensive
- Can be installed in any slitlamp
- Can extend the life of your bulbs and cuts down on electricity bills
- Can also be adapted for use with other devices requiring an automatic shutoff mechanism

Cons:

- Needs some knowledge in electronics and soldering components
- Acquiring the needed parts can be a challenge
- Needs a little rewiring of your slitlamp
- Strong ambient or room lights can interfere with the sensor